

Coherent Analyzer for Multi-Port Optical Networks

ABSTRACT

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An optical interface device for use in coherent testing of a device for its response to a stimulus signal. The interface includes a reference signal generator for generating a reference signal and a stimulus signal from the light signal input to the interface. A first optical switch routes the stimulus signal to one of the device test ports. A second optical switch routes a light signal from the device under test to the test signal output port. A plurality of optical routers are utilized for connecting the device test ports to the first and second switches. The output of the optical routers also provides a signal related to the intensity of the light signal leaving the device test port for use in correcting the data for variations in intensity in the stimulus light signal. A polarization synthesizer for setting the polarization state of the stimulus signal may also be included.